AMENDMENTS TO THE SPECIFICATION

Please amend paragraphs 7 and 31 the specification as follows

[0007] Abstracted network maps may be associated with a route planning procedure that compensates for transmission level routing constraints such as those taught in co-pending co-assigned United States patent application entitled METHOD AND APPARATUS FOR DERIVING ALLOWABLE PATHS THROUGH A NETWORK WITH INTRANSITIVITY CONSTRAINTS filed October 24, 2003 under serial number 10/691,517, and United States patent application entitled METHOD AND APPARATUS FOR DERIVING OPTIMAL PATHS THROUGH A NETWORK SUBJECT TO A SUBSET SEQUENCE CONSTRAINT filed on ~~—~~February 27, 2004 under serial number ~~———~~10/787,107. These and other route planning procedures (including some that are variations of Dijkstra's algorithm) require abstracted link metric information correctly associated with resource availability of the provider network, in order to correctly select optimal routes. However, no procedure for computing link metric information for abstracted network links (i.e. links in the abstract network map between NEs that may not be linked in the provider network, but rather represent a set of all available routes through the provider network between the represented NEs) is known.

[0031] FIG. 3 shows principal steps in a procedure for computing metric information for an abstracted link between a PNE represented in an abstracted network map, and all other PNEs represented in the abstract network map using resource availability information relating to physical links of the provider network available at the PNE. The process is related to an algorithm known in the art as the shortest widest path algorithm taught by Zhang Wang and Jon Crowcroft in a paper entitled Quality-of-Service Routing for Supporting Multimedia Applications published in IEEE Journal on Selected Areas in Communications, Volume 14,

No. 7, September 1996, pp. 1228-1234~~, which is incorporated herein by reference~~. In general the shortest widest path algorithm is one of many adaptations of Dijkstra's algorithm which constructs a tree to span a graph. The tree is constructed by iteratively expanding a tree rooted at a root node of the graph to a node adjacent to an instant node in the tree when a path from the root node to the adjacent node through the instant node corresponds to an optimal route in the network represented by the graph, as defined by a selected algorithm. In accordance with the shortest widest path algorithm, the optimal path corresponds to a route of optimal resource availability over physical links between the PNE represented by the root node, and a second NE represented by the node adjacent to the instant node in the tree.